I. AMENDMENTS

IN THE CLAIMS

Cancel claim 20 without prejudice to renewal.

Please enter new claims 52-60, as shown below.

1-17. (Canceled)

18. (Previously Added) A method of delivering a secreted protein into the bloodstream of a mammalian subject, the method comprising:

introducing into the gastrointestinal tract of a mammalian subject by oral administration a construct comprising:

a) a nucleic acid molecule comprising a coding sequence encoding a protein; and

b) a promoter sequence operably linked to the coding sequence, wherein said construct is not packaged in a viral particle, said introducing resulting in introduction of the construct into an intestinal epithelial cell, production of the encoded protein in the intestinal epithelial cell and secretion of the protein from the cell and into the bloodstream of the subject.

19. (Previously Added) The method of claim 18, wherein the protein is a fusion protein.

20. (Canceled) The method of claim 18, wherein the protein is altered relative to a wild-type protein.

21. (Previously Added) The method of claim 18, wherein the nucleic acid molecule is formulated as a liquid, a solid, a pill, a capsule, a tablet, a solution, a gel, a syrup, a slurry or a suspension.

22. (Previously Added) The method of claim 18, wherein the nucleic acid molecule is formulated to facilitate swallowing.

23. (Previously Added) The method of claim 18, wherein the nucleic acid molecule is formulated with an agent that protects against degradation.

24. (Previously Added) The method of claim 18, wherein the nucleic acid molecule is formulated as a time-release formulation.

25. (Previously Added) The method of claim 18, wherein the nucleic acid molecule is associated with an agent that facilitates delivery to the target cell.

26. (Withdrawn from consideration)

27. (Previously Added) The method of claim 18, wherein the protein increases an immune response.

28. (Withdrawn from consideration)

29. (Previously Added) The method of claim 18, wherein the protein is an antigen.

30. (Previously Added) The method of claim 29, wherein the antigen is a viral antigen.

31. (Previously Added) The method of claim 29, wherein the antigen is a bacterial antigen.

32. (Previously Added) The method of claim 29, wherein the antigen is a fungal antigen.

33. (Previously Added) The method of claim 29, wherein the antigen is a parasitic antigen.

34-45. (Withdrawn from consideration)

46. (Previously Added) The method of claim 18, wherein the protein is a plasma protein.

47.-51. (Withdrawn from consideration)

-- 52. (New) A method of inducing an immune response to a secreted protein antigen in the bloodstream of a mammalian subject, the method comprising:

introducing into the gastrointestinal tract of a mammalian subject by oral administration a construct comprising:

a) a nucleic acid comprising a coding sequence encoding a secreted protein antigen; and

b) a promoter operably linked to the coding sequence, wherein said construct is not packaged in a viral particle, said introducing resulting in introduction of the construct into an intestinal epithelial cell and secretion of the protein antigen from the cell and into the bloodstream of the subject, and wherein an immune response to the protein antigen is induced in the subject.

53. (New) The method of claim 52, wherein the antigen is a viral antigen.

54. (New) The method of claim 52, wherein the antigen is a bacterial antigen.

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55. (New) The method of claim 52, wherein the antigen is a fungal antigen.

56. (New) The method of claim 52, wherein the antigen is a parasitic antigen.

57. (New) The method of claim 52, wherein the nucleic acid molecule is formulated as a liquid, a solid, a pill, a capsule, a tablet, a solution, a gel, a syrup, a slurry or a suspension.

58. (New) The method of claim 52, wherein the nucleic acid molecule is formulated to facilitate swallowing.

59. (New) The method of claim 52, wherein the nucleic acid molecule is formulated with an agent that protects against degradation.

60. (New) The method of claim 52, wherein the nucleic acid molecule is formulated as a time-release formulation. --